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### LISTING OF CLAIMS

This listing of the claims will replace all prior versions, and listings, of claims in the application:

1. (Cancelled)
2. (Cancelled)
3. (Cancelled)
4. (Cancelled)
5. (Cancelled)
6. (Currently amended) A sensor with a matrix of light-sensitive or X-ray sensitive sensor elements ( $S_{1,1}$ ,  $S_{1,2}$ , ...) arranged in rows and columns, which sensor elements generate charges in dependence on a quantity of radiation incident thereon, including a respective switch (3) with an address line (4, ..., 8, ...) for each sensor line for connection to activation means (20) via which the electrical sensor switches can be activated, a read-out line (9, ..., 13, ...) for each sensor column via which the charges of the respective activated sensor elements are drained, transmission means (19) at the end of the relevant read-out line for converting the signals read out in parallel into a serial signal, and a plurality of amplifiers (14, ..., 18, ...) arranged to precede the transmission means, wherein a first unit of switch elements (27, ..., 30, ...) is arranged between the activation means (20) and the electrical sensor switches, a second unit of switch elements (31, ..., 34, ...) is arranged between the electrical sensor switches and amplifiers (14, ..., 18, ...), and a system (21, 35) for controlling the switching operations of the switch elements is included in order to connect each switch element or a read-out line to at least one neighboring line, and wherein A sensor as claimed in Claim 4, characterized in that the

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control system for the first and the second unit of switch elements consists of a first and a second shift register (20, 35) with a plurality of shift register elements (22, ..., 26, ...; 36, ..., 40, ...), where each shift register element being associated with one switch element per address line or read-out line.

7. (Original) A sensor as claimed in Claim 6, characterized in that a shift register is constructed so as to be bidirectional.

8. (Original) A sensor as claimed in Claim 6, characterized in that additionally to the two shift registers (20, 35), or instead of the shift registers, there is provided a random accessible register.

9. (Currently Amended) A sensor as claimed in Claim 6, characterized in that the relevant control shift register is double buffered.

10. (Cancelled)

11. (Cancelled)

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